

**BEFORE**

**THE PUBLIC SERVICE COMMISSION OF**

**SOUTH CAROLINA**

**DOCKET NO. 2019-182-E - ORDER NO. 2020-\_\_**

**JANUARY \_\_, 2021**

IN RE:

South Carolina Energy Freedom Act	)	<b>SOUTH CAROLINA OFFICE</b>
(House Bill 3659) Proceeding Initiated	)	<b>OF REGULATORY STAFF'S</b>
Pursuant to S.C. Code Ann. Section	)	<b>PROPOSED ORDER</b>
58-40-20(C): Generic Docket to (1)	)	
Investigate and Determine the Costs	)	
and Benefits of the Current Net	)	
Metering Program and (2) Establish a	)	
Methodology for Calculating the	)	
Value of the Energy Produced by	)	
Customer-Generators (See Docket No.	)	
<u>2020-229-E)</u>	)	

**I. INTRODUCTION**

This matter comes before the Public Service Commission of South Carolina (“PSC” or “Commission”) following the enactment of the South Carolina Energy Freedom Act (“Act 62”); specifically, S.C. Code Ann. § 58-40-20(C) of Act 62.<sup>1</sup> South Carolina Code Ann. § 58-40-20(C) instructed this Commission to open a generic docket no later than January 1, 2020 to investigate and determine the costs and benefits of the current net energy metering (“NEM”) program; and establish a methodology for calculating the value of the energy produced by customer-generators. S.C. Code Ann. § 58-40-20(C) (Supp. 2019). The Commission opened this docket on May 28, 2019.

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<sup>1</sup> House Bill 3659, R. 82 was signed into law by South Carolina’s Governor Henry McMaster on May 16, 2019, as Act 62.

## II. PROCEDURAL HISTORY

On June 14, 2019, the Commission held an Advisory Committee meeting to discuss procedural and scheduling matters pertaining to the Act 62 dockets. By Commission Order No. 2020-847, the Commission provided a procedural schedule for this docket and solicited comments from the parties.

Petitions to Intervene were filed by the following parties: Vote Solar; South Carolina Coastal Conservation League (“CCL”); Southern Alliance for Clean Energy (“SACE”); Upstate Forever; North Carolina Sustainable Energy Association (“NCSEA”); Solar Energy Industries Association (“SEIA”); South Carolina Appleseed Legal Justice Center (“Appleseed”); Nucor Steel – South Carolina (“Nucor”); and Alder Energy Systems, LLC (“Alder”). All Petitions to Intervene were approved.<sup>2</sup> The South Carolina Office of Regulatory Staff is a party of record by statute. S.C. Code Ann. § 58-4-10.

On August 12, 2020, the Commission issued Order No. 2020-532 setting forth a procedural schedule and requesting the utilities submit Applications that contain improvements to the procedures and methodology set forth in Order No. 2015-194, best practices from other jurisdictions, and a cost benefit analysis. After receiving feedback from various parties, the Commission issued Order No. 2020-570 setting forth a revised procedural schedule, and ordering separate proceedings for the solar choice tariff and this generic docket to address the methodology for valuing the energy produced by customer generators and the cost-benefit analysis of NEM.

In Order No. 2020-570, the Commission instructed all parties to file Direct Testimony on October 8, 2020 and all Rebuttal Testimony to be filed on October 29, 2020, with a hearing

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<sup>2</sup> See Order Nos. 2020-366; 2020-367; 2020-476; 2020-597; 2020-654; 2020-655; 2020-726.

scheduled to commence on November 17, 2020. On August 27, 2020, the Commission's Clerk's Office issued the Notice of Filing and Hearing and Prefile Testimony Deadlines.

On October 8, 2020, SACE, CCL, Upstate Forever, and Vote Solar filed the Direct Testimony and Exhibits of Frank Hefner. CCL, SACE, Upstate Forever, Vote Solar, SEIA, and NCSEA filed the Direct Testimony and Exhibits of R. Thomas Beach. DESC filed the Direct Testimony and Exhibits of Margot Everett and Scott Robinson, and the Direct Testimony of Mark Furtick. SEIA and NCSEA filed the Direct Testimony and Exhibit of Justin R. Barnes. ORS filed the Direct Testimony and Exhibits of Dr. John Ruoff and Brian Horii, and the Direct Testimony of Robert A. Lawyer. Duke filed the Direct Testimony and Exhibits of Lon Huber, Dr. Julius Wright, George Brown and Leigh Ford, and the Direct Testimony of Bradley Harris.

On October 29, 2020, ORS filed the Rebuttal Testimony of Brian Horii. CCL, SACE, Upstate Forever, Vote Solar, SEIA, and NCSEA filed the Rebuttal Testimony of R. Thomas Beach. SEIA and NCSEA filed the Rebuttal Testimony of Justin R. Barnes. Duke filed the Rebuttal Testimony and Exhibits of Bradley Harris, and Dr. Julius A. Wright, and the Rebuttal Testimony of Lon Huber. DESC filed the Rebuttal Testimony of Margot Everett and Mark Furtick. Vote Solar filed the Rebuttal Testimony of Odette Mucha. Alder filed Direct and Rebuttal Testimony together of Don Zimmerman. On November 13, 2020, Alder filed Exhibits to witness Zimmerman's Direct and Rebuttal Testimony.

### **III. JURISDICTION OF THE COMMISSION**

On May 16, 2019, the Governor of South Carolina signed Act 62 into law; Act 62 pertains to a range of issues related to the expansion of renewable energy generation and utility resource planning, and it provides this Commission with both increased direction and discretion in

determining the most appropriate path forward for energy development in South Carolina. Through Act 62, the General Assembly's intentions were to:

- (1) build upon the successful deployment of solar generating capacity through Act 236 of 2014 to continue enabling market-driven, private investment in distributed energy resources across the State by reducing regulatory and administrative burdens to customer installation and utilization of onside distributed energy resources;
- (2) avoid disruption to the growing market for customer-scale distributed energy resources; and
- (3) require the commission to establish solar choice metering requirements that fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable.

In accordance with S.C. Code Ann. § 58-40-20 (C), on May 28, 2019, the Commission opened this generic docket to:

- (1) investigate and determine the costs and benefits of the current net energy metering program; and
- (2) establish a methodology for calculating the value of the energy produced by customer-generators.

S.C Code Ann. §58-40-20 (D) provides five (5) components for this Commission to consider when assessing the costs and benefits of the current NEM program:

- (1) the aggregate impact of customer-generators on the electrical utility's long-run marginal costs of generation, distribution, and transmission;
- (2) the cost of service implications of customer-generators on other customers within the same class, including an evaluation of whether customer-generators provide an adequate rate of return

to the electric utility compared to the otherwise applicable rate class when, for analytical purposes only, examined as a separate class within a cost of service study;

(3) the value of distributed energy resource generation according to the methodology approved by the commission in Commission Order No. 2015-194;

(4) the direct and indirect economic impact of the net energy metering program in the State; and

(5) any other information the Commission deems relevant.

#### **IV. DISCUSSION OF THE HEARING**

The Commission conducted a virtual proceeding in this manner due to the COVID-19 Pandemic, starting on November 17, 2020 and continuing through November 19, 2020. All parties and witnesses appeared virtually. The witnesses' testimonies were read as if given orally from the stand and exhibits were moved into the record.

Dominion Energy South Carolina, Incorporated ("DESC") was represented by K. Chad Burgess, Esquire and Matthew W. Gissendanner, Esquire. Duke Energy Carolinas, LLC and Duke Energy Progress, LLC (together "Duke") were collectively represented by Heather Shirley Smith, Esquire, Rebecca J. Dulin, Esquire, J. Ashley Cooper, Esquire and Marion William Middleton III, Esquire. Vote Solar was represented by Bess J. Durant, Esquire and Thadeus B. Culley, Esquire. CCL, SACE, and Upstate Forever were represented by Katherine Nicole Lee, Esquire. NCSEA was represented by Jeffrey W. Kuykendall, Esquire and Peter H. Ledford, Esquire. SEIA was represented by Jeffrey W. Kuykendall, Esquire. Appleseed was represented by Adam Protheroe, Esquire. Nucor was represented by Robert R. Smith, II, Esquire. Alder was represented by R. Taylor Speer, Esquire. ORS was represented by Jeffrey M. Nelson, Esquire and Jenny R. Pittman, Esquire.

DESC presented Mark Furtick as its first witness. Witness Furtick, the Manager of Renewable Energy Programs and Technical Services for DESC, provided an overview of DESC's current NEM programs, outlined the requirements of Act 62 related to the current NEM programs, and provided an overview of DESC's analysis in this docket. DESC presented witness Scott Robinson, the Associate Director in the Advances Solutions Group at Guidehouse, as its next witness. Witness Robinson testified to the forecast of behind-the-meter rooftop solar photovoltaic ("PV") adoption in DESC's service territory as shown in Guidehouse's Solar Forecast and the methodology and assumptions made by Guidehouse in the development of the Solar Forecast. As its final witness, DESC presented witness Margot Everett, the Director for Guidehouse. Witness Everett testified to the value of solar methodology currently used in DESC's NEM programs and proposed changes to that methodology, and the current value of solar estimates. Witness Everett also testified to industry best practices as requested by Commission Order No. 2020-532.

After DESC concluded its case, Duke presented witness George Brown, the General Manager of Strategy, Policy, and Strategic Investment for Distributed Energy Technology in the Enterprise Strategy and Planning Group at Duke Energy Corporation ("Duke Energy"). Witness Brown testified to an overview of Duke's existing NEM programs under Act 236 and provided forecasts of solar adoption in Duke's South Carolina service territories under different NEM rate design options. The hearing reconvened on November 18, 2020 with Leigh Ford, a consultant with Duke, taking the stand. Witness Ford testified to the stakeholder engagement process and how the stakeholder input influenced Duke's analyses in this docket. Duke then presented the testimony of Dr. Julius A. Wright, the managing partner of J. A. Wright & Associates, LLC. Dr. Wright testified to the process used when an economic analysis is performed when one seeks to determine the direct and indirect economic impact of a particular policy or program.

Upon consent of the parties to this proceeding and approval of the Commission, CCL, SACE, Upstate Forever, Vote Solar, SEIA, and NCSEA presented R. Thomas Beach out of order. Witness Beach, principal consultant of Crossborder Energy, recommended changes to the benefit-cost methodology for valuing distributed generation resources in South Carolina, and the best practices in valuing those resources.

As with witness Beach, the Commission took the testimony of Justin R. Barnes out of order. Witness Barnes, Director of Research with EQ Research, LLC testified to the conceptual framework for NEM, how direct and indirect economic impacts can be analyzed in this proceeding, and how NEM affects resiliency of the electric grid.

Duke resumed its presentation and offered the testimony of Bradley Harris, Rates and Regulatory Strategy Manager. Witness Harris testified to the cost of service implications and impacts on long-run costs under NEM programs for Duke.

Duke concluded its case with witness Lon Huber, Vice President for Rate Design and Strategic Solutions for Duke Energy. Witness Huber testified to NEM best practices from other jurisdictions, how these best practices related to the existing NEM programs and how they could be implemented under Act 62.

After Duke concluded its case, CCL, SACE, Upstate Forever, and Vote Solar presented Dr. Frank Hefner, Professor of Economics at the College of Charleston. Dr. Hefner testified about the benefits that the solar industry, specifically rooftop net-metered solar, have on the economy of South Carolina.

Odette Mucha, Southeast Regulatory Director of Vote Solar, testified next. Witness Mucha offered rebuttal to ORS's testimony about the importance of examining energy burden and equitable energy policy in this proceeding.

The hearing reconvened on November 19, 2020 and Alder presented Donald Zimmerman, the founder and current President and Chief Executive Officer of Alder as its sole witness. Witness Zimmerman's testimony addressed the rights and interest of commercial and industrial customers and their participation in distributed resources in South Carolina.

ORS then presented Robert A. Lawyer, Deputy Director of Energy Efficiency and Renewables in the Utility Rates and Services Division of ORS. Witness Lawyer provided an overview of ORS's position and recommendations in this proceeding. ORS next presented Dr. John Ruoff, Principal and Owner of The Ruoff Group. Dr. Ruoff testified about the impact of cost-shifting or cross-subsidization of net metering customers by customers who do not have, do not want, and cannot afford to install solar generation. As its final witness, ORS presented Brian Horii, a Senior Partner with Energy and Environmental Economics, Inc. ("E3"). Witness Horii provided testimony regarding ORS's recommendations based on its review and analyses of the requirements of Act 62. Witness Horii also testified how avoided and embedded cost of service ("COS") studies should be evaluated and utilized in the design of the Solar Choice Metering Tariffs to be considered in future proceedings pursuant to S.C. Code § 58-40-20 (F).

## **V. REVIEW OF THE EVIDENCE AND FINDINGS OF FACT**

DESC witness Furtick testified there was a consensus among the parties in this docket that there is a certain amount of cost-shifting and subsidization occurring under the current NEM programs, essentially a value is being paid to NEM customers by non-NEM customers.<sup>3</sup> ORS witness Horii testified Act 62 requires this Commission to consider how to reform NEM rates to compensate NEM customers while at the same time eliminating or minimizing the cost shift burden created by behind-the-meter installations as much as practicable, and specifically

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<sup>3</sup> Furtick Rebuttal p. 7, ll. 13-18.



highlighted the importance of ensuring any cost shift borne by non-NEM customers is properly calculated so that this Commission may make a properly informed decision about the impact to the low- to moderate-income non-NEM customers.

ORS witness Ruoff testified that rooftop solar is largely inaccessible to low-income South Carolinians; due to the high cost of purchasing and/or leasing the systems and the fact that rooftop solar is rarely an option in rental housing, which is the most prevalent of low-income housing options.<sup>4</sup> DESC witness Everett testified “it is well-established that customers that install generation behind the meter are wealthier homeowners who have the access and can afford these systems.”<sup>5</sup> Witness Ruoff testified the energy burden in South Carolina is significant, and the cost-shifting or cross-subsidization of rooftop solar would only intensify that burden on low-income customers.<sup>6</sup> Several other parties testified that affordability and accessibility of rooftop solar are important issues that need to be addressed. Vote Solar witness Mucha testified “the issues of energy burden and equitable energy policy are important and worthy of Commission attention” in energy proceedings, but felt the issues were not suited for this generic proceeding.<sup>7</sup> Witness Mucha further testified there are a variety of energy solutions geared at easing the energy burden for low-income customers, such as energy efficiency, rooftop and community solar, and low-income specific rates.<sup>8</sup> CCL, SACE, Upstate Forever, Vote Solar, SEIA, and NCSEA witness Beach testified utilities, the solar industry, the Commission, and the state of South Carolina can develop programs to increase the access of low-income customers to solar technology, as has been done in

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<sup>4</sup> Ruoff Direct p. 4, ll. 5-11.

<sup>5</sup> Everett Rebuttal p. 12, ll. 4-6.

<sup>6</sup> Ruoff p. 3, ll. 8-14.

<sup>7</sup> Mucha Rebuttal p. 2, ll. 4-9.

<sup>8</sup> Mucha Rebuttal p. 4, ll. 7-11.

other jurisdictions.<sup>9</sup> Witness Beach testified in other jurisdictions the solar industry is a “strong supporter and partner in such programs to expand solar access.”<sup>10</sup>

Duke Witness Huber testified in rebuttal that many of the parties in this docket, while using various analyses, came to similar conclusions about the range of cost-shift, subsidization, or cross-subsidization that is a common occurrence with NEM programs.<sup>11</sup> Witness Huber testified the Commission should encourage the range of data, tests, and analysis provided in this generic docket for further methodological dockets.<sup>12</sup> Act 62 directs the Commission to investigate and determine the costs and benefits of the current NEM programs, and ORS witness Horii testified there are various cost and benefit impacts to the utility that can be a result of the current NEM program.<sup>13</sup> Witness Horii testified the task of balancing the conflicting goals of cost shift minimization and support of the DER market is difficult, and will require a thorough review of each utility’s Solar Choice Metering tariff and underling data.<sup>14</sup> In determining the cost shift associated with NEM, witness Horii recommended the use of both marginal costs and embedded COS studies.<sup>15</sup> Witness Horii explained the marginal-cost-based shift indicates the impact of a customer installing NEM solar at their premise, and it is the immediate impact without any rate changes and assumes the bill prior to the installation of NEM solar is the appropriate starting point.<sup>16</sup> Witness Horii testified the embedded COS study does not assume that the bill prior to the installation of NEM solar is the correct starting point, and instead determines its own starting point for NEM solar by modeling the NEM solar customers as if they were a separate class or subclass.<sup>17</sup> The embedded COS,

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<sup>9</sup> Beach Rebuttal p. 26, ll. 19-24.

<sup>10</sup> Id. at ll. 23-24.

<sup>11</sup> Huber Rebuttal p. 4, ll. 1-3.

<sup>12</sup> Huber Rebuttal p. 4, ll. 8-10.

<sup>13</sup> Horii Direct p. 4, l. 17 to p. 7, l. 6.

<sup>14</sup> Horii Direct p. 7, ll. 10-14.

<sup>15</sup> Horii Direct p. 15, ll. 16-21.

<sup>16</sup> Horii Direct p. 15, l. 21 to p. 16, l. 1.

<sup>17</sup> Horii Direct p. 16, ll. 8-11.

witness Horii testified, then estimates the cost shift as the difference between its determination of the hypothetical “correct” rate for NEM solar customers versus the existing or proposed Solar Choice Metering Tariff.<sup>18</sup>

Witness Horii explained that with the differences in these two (2) approaches, the marginal cost approach is the more appropriate method to determine the cost shift that will occur due to some customers installing behind-the-meter solar. However, the embedded COS approach is still necessary for evaluating the policy issue of whether the solar customers would be paying their fair share of costs, as specified in S.C. Code Ann. § 58-40-20 (D)(2).<sup>19</sup> CCL, SACE, Upstate Forever, Vote Solar, SEIA, and NCSEA witness Beach testified both marginal and embedded COS analyses are necessary in evaluating the reasonableness of an NEM tariff, and that Act 62 requires consideration of both in the design of the Solar Choice Tariffs.<sup>20</sup> Duke witness Huber testified both marginal and embedded analyses should be considered in this proceeding and in future Solar Choice Tariffs, as the embedded cost tells if customer-generators are paying for their fair share of historical costs and marginal cost studies tell if customer-generators will pay for their share of future costs.<sup>21</sup> Duke witness Harris further explained that if one study is used to the exclusion of the other, it may not provide the Commission with the tools necessary to establish a tariff that fairly allocates costs and benefits in accordance with Act 62.<sup>22</sup>

ORS witness Horii testified there are additional benefits to be evaluated with regard to behind-the-meter solar that Act 62 requires this Commission to investigate and quantify.<sup>23</sup> Witness Horii testified these indirect economic impacts should not be included in the primary valuation of the

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<sup>18</sup> Horii Direct p. 16, ll. 11-13.

<sup>19</sup> Horii Direct, p. 16, ll. 14-18.

<sup>20</sup> Beach Rebuttal p. 24, ll. 2-5.

<sup>21</sup> Huber Rebuttal p. 7, ll. 12-19.

<sup>22</sup> Harris Rebuttal p. 7, ll. 19-22.

<sup>23</sup> Horii Direct p. 5, l. 16 to p. 6, l. 3.

NEM program, but should be included in consideration of the tradeoffs between the goal of eliminating any cost shift and the General Assembly's intent to support the market for customer-scale solar.<sup>24</sup> SEIA and NCSEA witness Barnes testified the framework supplied by ORS witness Horii for incorporating direct and indirect economic impacts into the evaluation of costs and benefits is reasonable and satisfies the requirements of Act 62.<sup>25</sup> DESC witness Everett testified in agreement with ORS witness Horii, stating Horii's recommendation for evaluating the indirect benefits is consistent with policy that not all benefits should be included in a direct incentive to customer-generators.<sup>26</sup> Duke witness Wright testified in agreement that indirect economic benefits should not be included in the primary valuation of NEM and that information on such benefits should be take on a qualitative basis and used to distinguish between or support programs or policies that minimize or eliminate cost shifting.<sup>27</sup>

ORS witness Horii testified the methodology for valuating solar adopted by this Commission in Order No. 2015-194 is appropriate, the specific components used to calculate the values are valid and should be continued.<sup>28</sup> This methodology consists of a value stack of eleven (11) avoided costs components. The parties were in agreement that the methodology adopted in Commission Order No. 2015-194 remains appropriate and should continue to be used. Witness Horii testified to the importance of including a non-zero value for transmission and distribution ("T&D") costs in this methodology.<sup>29</sup> CCL, SACE, Upstate Forever, Vote Solar, SEIA and NCSEA witness Beach testified a rooftop solar system could serve a customer without ever flowing onto the grid, therefore causing a reduction in the utility's transmission and distribution costs.<sup>30</sup>

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<sup>24</sup> Horii Direct p. 6, ll. 3-7.

<sup>25</sup> Barnes Rebuttal p. 3, ll. 20-21.

<sup>26</sup> Everett Rebuttal p. 14, ll. 17-19.

<sup>27</sup> Wright Rebuttal p. 5, ll. 7-10.

<sup>28</sup> Horii Direct p. 22, ll. 5-8.

<sup>29</sup> Horii Direct p. 24 to p. 27, l. 7.

<sup>30</sup> Beach Rebuttal p. 10, ll. 7-11.

In looking forward to the successor dockets to this proceeding, Duke witness Huber testified a common theme throughout the parties' testimony in this docket was that a more complex rate design is the solution to build upon existing NEM programs while meeting the requirements of Act 62.<sup>31</sup> ORS witness Horii testified the ideal tariff would minimize any cost shift between customers with and without the customer generator technology, while still allowing for customer choice to participate in rooftop solar.<sup>32</sup> Witness Horii testified in order to create an ideal tariff, a determination of the customer classes must be made, utility costs should be allocated to each class, then rates should be designed to collect each class's costs.<sup>33</sup> Witness Horii testified more complex tariffs with flat monthly service charges, time varying rates, and monthly demand charges are "the hallmarks of an ideal Solar Choice Metering Tariff."<sup>34</sup> Witness Horii testified a simpler rate structure is also a viable option, but only if solar customers are put into a separate rate class or on a separate tariff.<sup>35</sup> These two options can be used to satisfy the requirements of Act 62.<sup>36</sup>

This Commission, in evaluating future Solar Choice Metering Tariffs, must consider the costs, benefits and methodology of the current NEM program. In order to achieve this, and based on the aforementioned testimony of record, the Commission adopts the following framework for considering future Solar Choice Metering Tariffs in order to compensate solar customers while eliminating or minimizing the cost shift burden on non-solar customers to the greatest extent practicable:

1. Marginal cost is the appropriate method to estimate the cost shift, which is defined as the financial burden shifted to all customers by the installation of solar or other DER.

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<sup>31</sup> Huber Rebuttal p. 5, l. 17 to p. 6, l. 1.

<sup>32</sup> Horii Direct p. 35, ll. 14-16.

<sup>33</sup> Horii Direct p. 36, l. 1, to 37, l. 15.

<sup>34</sup> Horii Direct p. 40, ll. 7-16.

<sup>35</sup> Horii Direct p. 41, ll. 12-13.

<sup>36</sup> Horii Direct p. 43, ll. 12-18.

In evaluating future Solar Choice Metering Tariffs, this Commission will consider the cost shift impact on non-solar customers as a whole, while paying close attention to how harmful any cost shift impact could be on the non-solar low- to moderate- income customers in particular.

2. The methodology for calculating the value of solar adopted in Commission Order No. 2015-194 is appropriate. The value stack consisting of eleven (11) avoided costs components should continue to be used, unaltered, provided non-zero marginal T&D capacity costs are included in the marginal cost-based cost shift analysis.
3. Embedded COS studies are to be conducted by the utilities to comply with S.C. Code Ann. § 58-40-20 (D)(2); however, these studies rely on overly simplistic data and will be carefully scrutinized.
4. Indirect economic costs and benefits will be evaluated through a separate analysis to allow for a thorough comparison of any marginal cost-based cost shift to the additional indirect impacts of solar or other distributed energy resource. The evaluation of indirect economic costs and benefits will help inform the appropriateness of adopting Solar Choice Metering Tariffs that may continue cost shifts.
5. Tariffs that have fixed monthly charges, time varying energy charges, and demand-based charges are ideal components for a Solar Choice Metering Tariff as customers will be charged based on how the customers impose costs on the utility.
6. Simpler tariffs may also be appropriate Solar Choice Metering Tariffs if they are designed separate from the non-solar customer rates, are based on the characteristics of solar customers, and are mandatory for solar customers.

7. In addition to the utilities role in making rooftop solar available to all, the solar industry should consider ways to make rooftop solar adoption more attractive and accessible for low-income customers while maintaining a fair allocation of the costs and benefits to minimize any cost shift.

## **VI. CONCLUSION**

### **IT IS THEREFORE ORDERED THAT:**

1. The marginal cost method will be utilized by the utilities to estimate the cost shift, which is defined as the financial burden shifted to all customers by the installation of solar or other DER. In evaluating future Solar Choice Metering Tariffs, this Commission will consider the cost shift impact on non-solar customers as a whole, while paying close attention to how harmful any cost shift impact could be on the no-solar low- to moderate- income customers in particular.
2. The methodology for calculating the value of solar adopted in Commission Order No. 2015-194 is appropriate. The value stack consisting of eleven (11) avoided costs components should continue to be used, unaltered, provided non-zero marginal T&D capacity costs are included in the marginal cost-based cost shift analysis.
3. Embedded COS studies are to be conducted by the utilities to comply with S.C. Code Ann. § 58-40-20 (D)(2); however, these studies rely on overly simplistic data and will be carefully scrutinized.
4. Indirect economic costs and benefits will be evaluated through a separate analysis to allow for a thorough comparison of any marginal cost-based cost shift to the additional indirect impacts of solar or other DER. The evaluation of indirect economic costs and

benefits will help inform the appropriateness of adopting Solar Choice Metering Tariffs that may continue cost shifts.

5. Tariffs that have fixed monthly charges, time varying energy charges, and demand-based charges are ideal components for a Solar Choice Metering Tariff as customers will be charged based on how the customers impose costs on the utility.
6. Simpler tariffs may also be appropriate Solar Choice Metering Tariffs and will be considered if they are designed separate from the non-solar customer rates, are based on the characteristics of solar customers, and are mandatory for solar customers.
7. The solar industry shall consider creative ways to make rooftop solar adoption more attractive and accessible for low-income customers while maintaining a fair allocation of the costs and benefits to minimize any cost shift.
8. This Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:

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Justin Williams, Chairman

ATTEST:

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Jocelyn G. Boyd, Chief Clerk